Module Descriptor

Title	Internet Scripting		
Session	2025/26	**Status**	Published
Code	COMP09020	**SCQF Level**	9
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Frances McCormick		

Summary of Module

The module aims to equip students with the practical skills to be able to design and develop dynamic web applications for small businesses and organisations.

This module begins by introducing all the core technologies it covers, and then walks you through the installation of a web development server. You will then be ready to work through the many examples and exercises given in this module.

You will gain a grounding in the C# programming language, covering the basics of syntax, arrays, functions, and object-oriented programming. Then, with C# under your belt, you will move on to the SQLite database system, where you will learn everything from how SQLite databases are structured to how to generate complex queries.

After that, you will learn how you can combine C# and SQLite to create your own dynamic web applications. You will learn how build websites and services using ASP.NET Core 5, how to use Entity Framework Core to query and manipulate data using LINQ, and how to build rich web experiences using the Blazor framework.

Along the way, you'll find plenty of advice on good programming practices and tips that can help you find and solve hard-to-detect programming errors. There are also plenty of links to websites containing further details on the topics covered.

- This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module. Universal: Critical Thinker; Ethically-minded; and Research-minded. Work Ready: Problem-Solver; Effective Communicator; and Ambitious. Successful: Autonomous; Resilient; and Driven.

Module Delivery Method	**On-Campus**[1] ☒	**Hybrid**[2] ☒	**Online**[3] ☐	**Work -Based Learning**[4] ☐
Campuses for Module Delivery	☐ Ayr ☒ Dumfries	☒ Lanarkshire ☐ London ☐ Paisley	☒ Online / Distance Learning ☐ Other (specify) Online Delivery / Distance Learning applies to delivery in the BSc (Hons) Data, AI and Software Engineering programme only	

Terms for Module Delivery	Term 1	☐	Term 2	☐	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Demonstrate a critical understanding of the technologies and tools available for developing dynamic web applications.
L2	Make informed judgements in selecting a range of technologies and tools for developing a dynamic web application, and to communicate the rationale for the judgements arrived at
L3	Apply knowledge, skill and understanding in planning and developing a dynamic web application
L4	N/A
L5	N/A

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 9** Demonstrate a critical understanding of the capabilities and limitations of dynamic web technologies.

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Practice: Applied Knowledge and Understanding	**SCQF 9** Provide dynamic web solutions at a professional level in areas that may include a degree of novelty.
Generic Cognitive skills	**SCQF 9** Identify problems, analyse results and interpret common error messages to solve problems in a logical manner.
Communication, ICT and Numeracy Skills	**Please select SCQF Level** This subject area is entirely computer based so ICT skills feature heavily in the practice of the subject area.
Autonomy, Accountability and Working with Others	**Please select SCQF Level** Exercise autonomy and initiative to independently implement ASP.NET at a professional level.

Prerequisites	**Module Code**	**Module Title**
	Other	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours. The module will be delivered through a combination of lectures, which will develop the theoretical underpinning for the module content, and lab exercises and workshops which will enable you to develop the appropriate practical and analytical skills. In the lab, practical exercises will equip you with the core skills required to specify web solutions. All lecture, workshop and laboratory exercises will be published on the module's VLE.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	12
Laboratory / Practical Demonstration / Workshop	36
Independent Study	152
Please select	
Please select	
Please select	
TOTAL	200

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

You must have access to a computer with Internet access

You must have access to an Integrated Development Environment such as Visual Studio

Recommended Reading

Pro ASP.NET Core: Develop Cloud-Ready Web Applications Using MVC, Blazor, and Razor Pages by Adam Freeman

Beginning Database Programming Using ASP.NET Core: With MVC, Razor Pages, Web API, jQuery, Angular, SQL Server, and NoSQL by Bipin Joshi

Visual Studio Code Distilled: Evolved Code Editing for Windows, macOS, and Linux by Alessandro Del Sole (2019)

(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements

In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

For the purposes of this module, academic engagement equates to the following:

The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. This module has lab-based teaching and as such you are advised to speak to the Module Co-ordinator to ensure that specialist assistive equipment, support provision and adjustment to assessment practice can be put in place, in accordance with the University's policies and regulations.

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Computing**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**

Module Eligible for Compensation	☐ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Business and Applied Computing
Moderator	Graeme McRobbie
External Examiner	TBC
Accreditation Details	This module is accredited by BCS as part of a number of specified programmes.
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	2.2

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
A class test (practical) under strict examination conditions. The class test (practical) is intended to assess the student's understanding of the principles underpinning the technologies and frameworks studied in the module. The class test (practical) is worth 40% of the overall mark.
Assessment 2
A portfolio of practical work demonstrating the practical application of web development technologies and frameworks in producing a web-based solution to a problem. The portfolio of practical work is worth 60% of the overall mark.
Assessment 3
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Class Test	☒	☐	☐	☐	☐	40	2

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Portfolio of practical work	☐	☐	☐	☐	☐	60	

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	hours

Change Control

What	When	Who
Attendance and EDI regulations	20/01/2025	L Cunningham